

**REACTION CHAMBER ROLL PUMP**Abstract Of The Disclosure

A method and system for circulating sample solution within a reaction chamber containing a microarray. The reaction chamber contains, on each side, a shallow vertical and a deep vertical well at the corners of the microarray. The vertical wells having a gap between the active surface of the microarray and the bottom of the reaction chamber are filled with sample solution. As the reaction chamber is rotated, sample solution from the deep vertical well displaces sample solution in the gap between the active surface of the microarray and the bottom of the reaction vessel, and sample solution from that gap is, in turn, displaced into the shallow vertical well, from which it flows along the inner surface of a cover strip above the microarray back to the deep vertical well.